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EXAMINER

DINH, KHANH Q

ART UNIT PAPER NUMBER

2151

DATE MAILED: 04/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/614,489

Applicant(s)

SWALES, ANDREW G.

Examiner

Khanh Dinh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29-55 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 29-55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/6/04, 12/6/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

1. This is in response to the Amendments filed on 5/14/2004. Claims 29-52 and new claims 53-55 are presented for examination.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 29-31, 36-43, 46-51 and 53-55 are rejected under 35 U.S.C. 102(e) as being anticipated by Tosey et al., US pat. No.6,392,990.

As to claims 29 and 53, Tosey discloses a method for determining the correct Internet Protocol (IP) address for network-connected devices, comprising:

receiving from a target device (network computing devices 21 of fig.2, 31 and 32 of fig.3) on the network a request to be assigned an IP address, the request

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including a Media Access Control (MAC) address associated with the target device (see figs. 2, 3, col.5 lines 4-44 and col.6 lines 6-55).

issuing a query to one or more managed Ethernet switches (hub 33 fig.3 for connecting network computing device can assume the Ethernet port of the network peer device is in operation, see col.7 lines 6-33) on the network, each switch having a number of ports (ports of hub), where each query specifies the MAC address, requests that the queried managed Ethernet switch report the number of any port on which was received data sent by a device having the specified MAC address and receiving replies to one or more of the queries (using an Internet Control Message Protocol Test to delivery control messages from the computing devices, see col.6 lines 25-65).

in response to determining that one of the queried managed Ethernet switches and a port number reported by that switch corresponds to a single known IP address, assigning that known IP address to the target device (determining whether a computing device response or not, assigning an IP address to the network interface card corresponding to the computing device, see fig.4A, col.7 line 14 to col.8 line 58).

As to claim 30, Tosey discloses maintaining a database (using ARP cache as a table of MAC addresses and IP addresses in each of the computing device) listing one or more devices connected to a network, wherein each listed device has an entry that includes an IP address associated with the listed device, an identity of a managed Ethernet switch to which the listed device is associated, and a port number of the managed

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network switch to which the listed device is associated (see col.8 line 44 to col.9 line 54).

As to claim 31, Tosey discloses determining that one of the queried managed network switches and a port number (using network interface card) reported by that queried managed Ethernet switch corresponds to a known IP address includes matching the one of the queried managed Ethernet switches and the port number reported by that queried managed network switch to an entry in the database, thereby identifying the IP address in that entry to be the known IP address (updating ARP cache table, see col.8 line 44 to col.9 line 54).

As to claim 36, Tosey discloses sending messages to each device indicated by the one or more known IP addresses, so as to elicit a response from each of those devices currently in service, thereby identifying known IP addresses not in service by lack of response (when the computing device does not receive a response) and in response to determining that there is only a single known IP address not in service, assigning that known IP address to the target device (see col.7 line 14 to col.8 line 58).

As to claim 37, Tosey discloses each message sent is an ICMP ECHO or PING request (see col.6 lines 46-65).

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As to claims 38 and 39, Tosey discloses each message sent is a broadcast Address Resolution Protocol (ARP) request and a unicast Address Resolution Protocol (ARP) request (see col.7 line 34 to col.8 line 58).

As to claim 40, Tosey discloses periodically polling devices connected to the network to determine whether the current status of each device is in service or not in service; and updating a database with the current status based on the polling (using the failure detection and recovery method in fig.4a, col.6 line 6 to col.7 line 55 and col.8 lines 6-58).

As to claim 41, Tosey discloses consulting the database to identify known IP addresses not in service, and in response to determining that there is only a single known IP address not in service (when the computing device does not receive a response) and assigning that known IP address to the target device (see col.7 line 14 to col.8 line 58).

As to claims 42 and 43, Tosey discloses sending messages to each device, so as to elicit a response from each of those devices currently in service, thereby identifying known IP addresses not in service by lack of response (when the computing device does not receive a response) and sending a response to the target device for indicating to the target device that an IP address has been allocated (see col.7 line 14 to col.8 line 58 and col.9 lines 7-64).

As to claim 46, Tosey discloses a method for determining the correct Internet Protocol (IP) address for network-connected devices, comprising:

maintaining a database (ARP cache) listing one or more devices (network computing device 21 of fig.2, 31 and 32 of fig.3) connected to a network, wherein each listed device has an entry that includes an IP address associated with the listed device, an identity of a managed Ethernet switch (hub 33 fig.3 for connecting network computing device can assume the Ethernet port of the network peer device is in operation, see col.7 lines 6-33) to which the listed device is associated, and a port number (port of hub) of the managed network switch to which the listed device is associated (see figs.2, 3, col.5 line 4 to col.6 line 55).

receiving from a target device (31 of fig.3) on the network a request to be assigned an IP address, the request including a Media Access Control (MAC) address associated with the target device (see col.6 lines 6-55).

identifying the MAC address included in the request and identifying managed Ethernet switches associated with devices connected to the network whose IP addresses are listed in the database, thereby identifying target managed Ethernet switches, each managed Ethernet switch having a number of ports and capable of reporting the port to which a device is attached in response to a find port query specifying that device's MAC address (see col.6 line 56 to col.7 line 34).

issuing a query to each of the target managed Ethernet switches, where each query specifies the identified MAC address, and requests that the queried managed

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network switch report the number of any port on which was received a message sent by a device having the identified MAC address (using an Internet Control Message Protocol Test to delivery control messages from the computing devices, see col.7 line 35 to col.8 line 22).

analyzing replies to each of the queries to determine if an entry in the database matches one of the queried managed Ethernet switches and the port number reported by that switch; and in response to only one entry matching, assigning the IP address of that entry to the target device (determining whether a computing device response or not, assigning an IP address to the network interface card corresponding to the computing device, see fig.4A, col.8 lines 23-58).

As to claim 47, Tosey discloses determining that only one of the multiple possible IP addresses is not in service and assigning that one IP address to the target device (recognizing the new location of the mobile device and correctly routing the data packets to the second interface, see col.8 line 44 to col.9 line 55).

Claim 48 is rejected for the same reasons set forth in claim 29. As to the added limitations, Tosey further discloses that in response to determining that one of the queried managed Ethernet switches and a port number reported by that switch corresponds to more than one known IP address, determining that only one of the known IP addresses is not in service, and assigning that one known IP address to the

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target device (recognizing the new location of the mobile device and correctly routing the data packets to the second interface, see col.8 line 44 to col.9 line 55).

Claims 49-51 are rejected for the same reasons set forth in claims 40-42 respectively.

As to claims 54-55, Tosey discloses at least one of the managed network switches is connected to a hub having a number of hub ports and a plurality of devices coupled to the hub ports, at least one managed network switches reporting all MAC addresses and port assignments associated with the hubs and devices (see figs. 2, 3, col.5 lines 4-44 and col.6 lines 6-55).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 32-35, 44, 45 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tosey et al., US pat. No.6,392,990.

As to claims 32-35, Tosey discloses Internet standard document, assigned an IP address complies with the Protocol, the Dynamic Host Configuration Protocol (DHCP) and management protocol (see col.2 lines 1-46). It would have been obvious to one of the ordinary skill in the art at the time the invention was made to made these

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protocol in comply with the Internet standard document RFC 1493 (or 952 or 1531 or 1593) in the computer system of Tosey to process documents on the Internet because it would have established a series of numbered Internet informational documents and standards widely followed by commercial software and freeware in the Internet and Unix communities.

Claims 44 and 45 are rejected for the same reasons set forth in claims 33 and 34 respectively.

Claim 52 is rejected for the same reasons set forth in claim 48 (item 3 above). As to the added limitations, Tosey discloses Internet standard document, assigned an IP address complies with the Protocol, the Dynamic Host Configuration Protocol (DHCP) and management protocol (see col.2 lines 1-46). It would have been obvious to one of the ordinary skill in the art at the time the invention was made to made these protocol in comply with the Internet standard document RFC 1493 (or 952 or 1531 or 1593) in the computer system of Tosey to process documents on the Internet because it would have established a series of numbered Internet informational documents and standards widely followed by commercial software and freeware in the Internet and Unix communities.

Response to Arguments

6. Applicant's arguments filed on 5/14/2004 have been fully considered but they are not persuasive.

- Applicant asserts that the cited reference does not disclose "managed network switch".

Examiner respectfully disagrees. Tosey (U.S. Pat. No.6,392,990) discloses connecting network computing device can assume the Ethernet port of the network peer device is in operation (see col.7 lines 6-33) as rejected above.

- Applicant asserts that the cited reference does not disclose "receiving from a target device on the network a request to be assigned an IP address.

Examiner point out that the Tosey reference discloses a method and system for establishing an address list of peer computing devices on a subnet. In this particular case, Tosey discloses receiving from a target device (network computing devices 21 of fig.2, 31 and 32 of fig.3) on the network a request to be assigned an IP address (retesting the communication line from the network and the computing device and processing network IP address assignment, see figs. 2, 3, abstract, ol.5 lines 4-44 and col.6 lines 6-55).

Therefore, the examiner asserts that cited prior art teaches or suggests the subject matter broadly recited in independent claims 29, 46, 48, 52 and 53. Claims 30-45, 47, 49-51, 54 and 55 are also rejected at least by virtue of their dependency on independent claims and by other

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reasons set forth in the previous office action [mailed on 4/5/2004]. Accordingly, claims 29-55 are respectfully rejected.

Other prior art cited

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Dowling, US pat. No.6,636,499.
- b. Golikeri et al, US pat. No.6,597,700.

Conclusion

8. Claims 29-55 are rejected.

9. **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Dinh whose telephone number is (571) 272-3936. The examiner can normally be reached on Monday through Friday from 8:00 A.m. to 5:00 P.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung, can be reached on (571) 272-3939. The fax phone number for this group is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval IPAIRI system. Status information for published applications may be obtained from either Private PMR or Public PMR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Khanh Dinh
Patent Examiner
Art Unit 2151
4/12/2005


ZARNI MAUNG
SUPERVISORY PATENT EXAMINER